

CLAIMS

1. A congestion control unit comprising:

an input data measurement section for measuring a quantity of packet data to be inputted; and

5 a packet discarding judgment section for conducting a discarding judgment of an arriving packet and outputting a packet not to be discarded into an output queue and the input data measurement section,

10 the input data measurement section including a measurement section for outputting a constant quantity of packet data, which are inputted from the packet discarding judgment section, at a predetermined period and also including a smooth queue length calculating section for accumulating data outputted from the measurement section and outputting a constant  
15 quantity of accumulated data in the predetermined period, wherein

the packet discarding judgment section conducts congestion control by a packet discarding  
20 judgment based on a smooth queue length which is a quantity of accumulated data composed of a difference between a quantity of input data and a quantity of output data at each predetermined period in the smooth queue length calculating section.

25 2. A congestion control unit according to claim 1, wherein the input data measurement section periodically estimates a tendency of an increase in the smooth queue length, in the future, from a quantity of data accumulated in the input data measurement section,  
30 informs the packet discarding judgment section of the result of the estimation of the increase of the smooth queue length, and conducts batch processing in a period capable of being estimated, after the period capable of being estimated has passed.

35 3. A congestion control unit according to claim 2, wherein the packet discarding judgment section calculates the time, at which the smooth queue length exceeds a

threshold value, from a quantity of the future increase in the smooth queue length which has been informed, and judges whether an arriving packet is made to pass or is discarded according to the time.

5           4. A congestion control unit according to one of claims 1 to 3, wherein the packet discarding judgment section judges whether an arriving packet is made to pass or is discarded according to the packet discarding probability in which the smooth queue length is used as a  
10 parameter.

          5. A congestion control unit according to one of claims 1 to 4, wherein the smooth queue length  
calculating section includes a memory device or pointing  
device for calculating and displaying a quantity of  
15 accumulated data composed of a difference between the quantity of input data and the quantity of output data.